

LCI Review report (reviewed against "ILCD Data Network - entry-level requirements")

Draft template

Table 1: General review reporting items

REVIEW REPORTING			
General information			
Data set name	VCM / S-PVC / E-PVC production mix, at gate		
Data set UUID and version number	To be determined		
Data set locator (e.g. Permanent URI, URL, contact point, or database name and version, etc.)			
Data set owner	European Council of Vinyl Manufacturers (ECVM)		
Review commissioner(s)	PlasticsEurope		
Reviewer name(s) and affiliation(s), contact	Matthias Schulz DEKRA Assurance Services GmbH		
Review type applied	Independent external		
Date of review completion (DD/MM/YYYY)	30/04/2015		
Reviewed against / Compliance system name	ILCD Data Network - Entry-level requirements		
Reviewer assessment:			
Aspect	Yes	No	Comments
Quality compliance (aspects of ISO 14040 & 14044) fulfilled (see table 2)	X		
Method compliance (as in ISO 14040 & 14044) fulfilled and documented in data set	X		
Nomenclature compliance (see table 3) fulfilled	X		
Documentation compliance (see table 3) fulfilled	X		
Review compliance (Independent external review OR independent internal review + review report) fulfilled	X		
Overall compliance with ISO 14040 & 14044	X		
Overall compliance with "Compliance system"	X		
Date, location, reviewer signature	Stuttgart, 30/04/2015		

Table 2: Specific/detailed review reporting items for LCI data set: Quality compliance (ISO 14040 & 14044). Please note that for aggregated LCI result data sets, this includes key processes in the background system.

ITEMs	Comments
<p>Time-related coverage/representativeness:</p> <p>“age of data and the minimum length of time over which data should be collected”</p> <p>“qualitative assessment of the degree to which the data set reflects the true population of interest”</p>	<p>Very Good</p> <p>Foreground: 12 month averages representing the year 2013.</p> <p>Background: 2010—2013,</p> <p>Maximum temporal validity until end of 2018.</p> <p style="text-align: right;">(p.19)</p>
<p>Geographical coverage/representativeness:</p> <p>“geographical area from which data for unit processes should be collected to satisfy the goal of the study”</p> <p>“qualitative assessment of the degree to which the data set reflects the true population of interest”</p>	<p>Good</p> <p>Primary production data for the PVC production is from 25 different suppliers in the EU27 member states, Norway, and Switzerland (EU27+NO+CH).</p> <p style="text-align: right;">(p.19)</p>
<p>Technology coverage/representativeness:</p> <p>“specific technology or technology mix”</p> <p>“qualitative assessment of the degree to which the data set reflects the true population of interest”</p>	<p>Good</p> <p>The production processes were modelled using specific values from primary data collection at site, representing the specific technology for the precursor and polymer production of the companies. The LCI data represent the production mix of technologies in use in the defined production region employed by participating producers.</p> <p>Representativeness (with respect to the installed nameplate capacity of all European producers)</p> <p>VCM: 71%</p> <p>S-PVC: 60%</p> <p>E-PVC: 83%</p> <p style="text-align: right;">(p.17-19)</p>
<p>Precision:</p> <p>“measure of the variability of the data values for each data expressed (e.g. variance)”</p>	<p>Very Good</p> <p>Relevant foreground data is primary data, or modelled based on primary information sources of the owners of the technologies.</p> <p style="text-align: right;">(p. 22)</p>
<p>Completeness:</p> <p>“percentage of flow that is measured or estimated”; assessed on level of process</p>	<p>Good</p> <p>In general, the collected and applied data can be stated as complete, because no flows are omitted or substituted. However,</p>

ITEMs	Comments
	<p>for a few production sites it was not possible to obtain detailed emission data due to site-specific measurement and recording practices. In order to compensate for missing information on certain important inputs and outputs, average values (calculated based on the data reported by other production sites of the same process type weighted by product output) are used.</p> <p style="text-align: right;">(p. 22)</p>
<p>Consistency: “qualitative assessment of whether the study methodology is applied uniformly to the various components of the analysis”</p>	<p>Very Good</p> <p>To ensure consistency only primary data of the same level of detail and background data from the databases mentioned under ‘data sources’ were used. While building up the model, cross-checks concerning the plausibility of mass and energy flows were continuously conducted. The methodological framework is consistent throughout the whole model as the same methodological principles are used both in foreground and background system.</p> <p style="text-align: right;">(p. 21)</p>
<p>Sources of the data; Appropriateness of use primary/secondary data source</p>	<p>Foreground processes comprise the production units for EDC, VCM, S-PVC and E-PVC, including water treatment and on-site energy production as part of the respective site. The primary data for the production units and the on-site energy were collected from the participating member companies. Data concerning the precursor production, i.e. ethylene and chlorine, are taken from published Eco-profiles. Further background data is sourced from Ecoinvent or specific databases of the LCA practitioners.</p> <p style="text-align: right;">(p. 20)</p>
<p>Uncertainty of the information (e.g. data, models and assumptions).</p>	<p>Reliability of the collected primary data can be considered very high due to almost exclusively measured data across the entire sample. Furthermore, the background data can be considered very precise.</p> <p style="text-align: right;">(p. 22)</p>
<p>Others</p>	

Table 3: Specific/detailed review reporting items for LCI data set: Nomenclature and Documentation

ITEMs	Comments
Nomenclature	
Correctness and consistency of applied nomenclature (Preferred use of ILCD flows etc.; Correct nomenclature of other flows; Exclusion of not permissible waste flows, sum indicator elementary flows etc.)	Yes – database format is aligned and compatible with ILCD requirements (consistent nomenclature) -- conducted spot checks on the LCI (xls and ILCD xml)
Documentation	
Appropriateness of documentation (see Document “Documentation of LCA data sets”)	Yes – meta-data completed and appropriate; documentation aligned with ILCD standards.
Appropriateness / correctness of documentation form (ILCD Format)	Yes – Database format is aligned and compatible with ILCD requirements (consistent format of meta-data and content) -- spot checks were conducted on dataset.